CLAIMS

What is claimed is:

1. An apparatus for cutting, segmenting, compressing and extruding waxed corrugated cardboard sheets into a firelog having radially interlocking segments, comprising:

(a) a housing having an inlet end and an outlet end;

(b) a plurality of circular blades configured to slice at least one waxed corrugated cardboard sheet placed generally into the inlet end of said housing into cardboard strips;

(c) a cutting reel configured to cut the cardboard strips into cardboard segments;

(d) a compression conveyor auger having shaft carrying a helical blade with a plurality of flights; and

(e) a die, wherein said auger is configured to convey said cardboard segments into said die wherein the segments are compressed into a firelog.

2. An apparatus as recited in claim 1, further comprising at least one blade spacer positioned between adjacent circular blades.

3. An apparatus as recited in claim 2, wherein said blade spacers are configured with recessed centers to minimize the contact with an irregular inner surface of said circular blades to maintain a desired clearance between said blades.

4. An apparatus as recited in claim 1, wherein said plurality of circular blades comprises:

(a) a plurality of lower circular blades juxtaposed along a first common axis, said plurality of lower circular blades each including a first cutting edge;

(b) a plurality of upper circular blades juxtaposed along a second common axis, said plurality of upper circular blades each including a second cutting edge; and

(c) a circular blade axial adjustment mechanism wherein the axial position of at least one axis of said circular blades can be positioned in relation to the other axis of circular blades to thereby provide control of the juxtaposition forces between

upper and lower circular blades.

5. An apparatus as recited in claim 4, wherein said first common axis and said second common axis are along a first shaft and a second shaft, respectively, whereby rotation of said first shaft causes rotation of said lower circular blades and rotation of said second shaft causes rotation of said upper circular blades.

6. An apparatus as recited in claim 5, further comprising means for rotating said first and second shafts.

7. An apparatus as recited in claim 6, wherein said rotating means comprises a spur gear.

8. An apparatus as recited in claim 1, wherein said cutting blades are configured with teeth which are annularly disposed on the perimeter of said cutting blades.

9. An apparatus as recited in claim 8, wherein said teeth are non-fluted.

10. An apparatus as recited in claim 1, wherein said cutting blades are hollow ground.

11. An apparatus as recited in claim 4, wherein said first cutting edge overlaps said second cutting edge, and wherein said cutting blades are configured so that interaction between said upper cutting blades and said lower cutting blades proximal the location of cutting edge overlap causes corrugated cardboard being sliceably passed therethrough to exhibit cut edges containing significant fraying.

12. An apparatus as recited in claim 11, wherein said significant fraying is created by the rotating interaction of two hollow ground, non-fluted cutting blades.

13. An apparatus as recited in claim 8, wherein said first cutting edge

overlaps said second cutting edge, and wherein said overlap of first cutting edge and second cutting edge of said teeth provide a metered input feed of waxed corrugated cardboard as the teeth grip the waxed corrugated cardboard and the movement of the cutting blades pulls the waxed corrugated cardboard therethrough at a predetermined rate proportional to the rotational speed of the cutters.

14. An apparatus as recited in claim 1, further comprising at least one guide plate attached to the housing, said guide plate having slots configured to allow a generally arcuate portion of said circular blades to pass therethrough, wherein said guide plates direct, or guide, the insertion of waxed corrugated cardboard into the proper feed direction for slicing.

15. An apparatus as recited in claim 1, wherein a vertical guide plate is attached to the housing rearward of said circular blades in relation to the direction of cardboard feed, and wherein a lower portion of said vertical guide is aligned proximal to an upper guide plate on a lower end and extends upwardly to a height which provides for separation of waxed corrugated cardboard strips prior to contact with said cutting reel and additionally prevents reverse flow of material back into said circular blades.

16. An apparatus as recited in claim 1, wherein said cutting reel is mounted at a fifteen degree angle above the feed path of said waxed corrugated cardboard strips into said cutting reel.

17. An apparatus as recited in claim 1, further comprising a geared drive mechanism for rotating said cutting reel.

18. An apparatus as recited in claim 17, wherein said geared drive includes a set of spur gears connected to said cutting reel through which power is applied to rotate said cutting reel.

19. An apparatus as recited in claim 1, wherein said cutting reel comprises:

(a) a first and a second end plate;

(b) an axial shaft positioned perpendicularly between said first and said second end plate; and

(c) a plurality of longitudinal cutting blades disposed around said axial shaft, paddle-wheel style, which are retained generally parallel to said axial shaft and attached to said first and said second end plate.

20. An apparatus as recited in claim 19, wherein said cutting blades in said cutting reel include a helical twist extending between said first and said second end plate.

21. An apparatus as recited in claim 19, wherein a bed bar knife is attached to said housing anterior of said circular blades in relation to the direction of cardboard material feed, and wherein said bed bar knife is aligned proximal to lower guide plate positioned such that an edge of said bed bar knife is brought into material shearing proximity with said longitudinal cutting blades of said cutting reel so that the strips of waxed corrugated cardboard material passing rearwardly of said circular cutting blades are placed in shearing contact between the bed bar knife and reel for the production of segments thereof.

22. An apparatus as recited in claim 21, wherein a bed plate is configured for retention of said bed bar knife to allow interchangeable replacement of bed bar knives, wherein said bed plate is attached to said housing and retains said bed bar knife using at least one fastener in a position which provides shearing of the waxed corrugated cardboard strips into waxed corrugated cardboard segments.

23. An apparatus as recited in claim 22, wherein said bed bar knife is retained by said bed plate with non-adjustable fasteners.

24. An apparatus as recited in claim 22, wherein said bed bar knife is retained by at least one fastener which provides longitudinal adjustment of the bed bar knife in relation to the bed plate.

25. An apparatus as recited in claim 24, wherein said fastener comprises a turnbuckle.

26. An apparatus as recited in claim 1, further comprising a conveyor auger housing, said conveyor auger housing including rifling to aid the control of radial disposition and interlocking alignment of the waxed cardboard segments as extruded into the artificial firelog.

27. An apparatus as recited in claim 1, wherein the cardboard segments are compressed to a ratio between approximately 5:1 and approximately 8:1.

28. An apparatus as recited in claim 1, further comprising means for rotating said compression conveyor auger.

29. An apparatus as recited in claim 28, wherein said rotating means comprises a spur gear.

30. An apparatus as recited in claim 1, wherein said helical blade is tapered.

31. An apparatus as recited in claim 1, wherein said flights of said helical blade decrease in length toward said housing.

32. An apparatus as recited in claim 1, wherein the side profile of said helical blade becomes increasingly cupped towards said outlet end of said housing.

33. An apparatus as recited in claim 1, wherein said helical blade is configured with a buildup of weld material of a predetermined shape at the junction of said helical blade and said auger shaft, wherein said buildup of weld material provides a final pushing thrust of said segments into said die.

34. An apparatus as recited in claim 1, wherein said log die sets the cross-

sectional shape of an extruded firelog.

35. An apparatus as recited in claim 34, wherein said log die includes a compression zone.

36. An apparatus as recited in claim 1, wherein said log die includes at least one longitudinal surface groove which produces logs with protruding ridges.

37. An artificial firelog manufacturing apparatus, comprising:

(a) an enclosure;

(b) means for converting waxed corrugated cardboard into waxed corrugated cardboard segments, said converting means located within said enclosure;

(c) a housing within said enclosure, said housing including an inlet end and an outlet end, wherein said outlet end is tapered;

(d) an opening on said housing, said opening disposed adjacent said inlet end of said housing; and

(e) a compression conveyor screw rotatably disposed within said housing, said conveyor screw including a helical blade extending between said inlet end and said outlet end of said housing, said helical blade including a plurality of flights.

38. An apparatus as recited in claim 37, wherein the diameter of said helical blade tapers towards said outlet end of said housing.

39. An apparatus as recited in claim 38, wherein said housing has a length greater than seventeen inches and wherein the tapering of said helical blade occurs approximately within approximately the final seventeen inches of the housing toward said outlet end.

40. An apparatus as recited in claim 37, wherein said flights have a length that diminishes toward said outlet end of said housing.

41. An apparatus as recited in claim 37, wherein said helical blade is cupped and canted forward toward said outlet end of the last two flights.

42. An apparatus as recited in claim 37, wherein the attachment area of the last helical flight of said helical blade with said shaft includes a fillet between said shaft and said helical blade which provides thrust, or final pushing, of said segments into the compression die.

43. An apparatus as recited in claim 42, wherein said fillet is formed from weld material.

44. An apparatus as recited in claim 37, further comprising a hopper disposed within said enclosure, said hopper in communication with said opening of said housing and said waxed corrugated cardboard sheet converting means.

45. An apparatus as recited in claim 37, wherein said waxed corrugated cardboard converting means comprises:

(a) a plurality of lower circular blades juxtaposed along a first common axis, said plurality of lower circular blades each including a first cutting edge;

(b) a plurality of upper circular blades juxtaposed along a second common axis, said plurality of upper circular blades each including a second cutting edge;

(c) said plurality of lower and upper circular blades configured to slice the waxed corrugated cardboard placed therebetween into waxed corrugated cardboard strips, whereby said first common axis is parallel to said second common axis, and said first cutting edge overlaps said second cutting edge; and

(d) a cutting reel positioned to receive the waxed corrugated cardboard strips, said cutting reel capable of chopping the waxed corrugated cardboard strips into waxed corrugated cardboard segments.

46. An apparatus as recited in claim 45, wherein each of said cutting edges of said lower circular blades and said upper circular blades comprises a plurality of teeth.

47. An apparatus as recited in claim 46, wherein said teeth are non-fluted.

48. An apparatus as recited in claim 45, wherein a plurality of blade spacers are interleaved between said plurality of lower and upper circular blades such that the spacing between cutting blades, and thereby the width of the waxed corrugated cardboard slices, is set by the thickness of the spacers used.

49. An apparatus as recited in claim 48, wherein said blade spacers are configured with recessed centers to minimize the contact with the irregular inner surface of the circular blades to maintain proper clearances between blades.

50. An apparatus as recited in claim 45, wherein an upper guide plate and lower guide plate are positioned in relation to the upper and lower circular blades, respectively, and adjusted so as to direct waxed corrugated cardboard into said apparatus for proper slicing by the combination of upper and lower circular blades.

51. A firelog manufacturing apparatus, wherein waxed corrugated cardboard sheets are segmented and compressed as radially interlocking segments within a manufactured composite firelog extrusion, comprising:

(a) a housing for the apparatus which includes an inlet end and an outlet end; (b) a plurality of lower circular blades juxtaposed along a first common axis, said plurality of lower circular blades each including a first cutting edge;

(c) a plurality of upper circular blades juxtaposed along a second common axis; said plurality of upper circular blades each including a second cutting edge;

(d) said plurality of lower and upper circular blades configured to slice at least one waxed corrugated cardboard sheet placed therebetween and generally into the input end of said housing, into cardboard strips, whereby said first common axis is approximately parallel to said second common axis, and said first cutting edge overlaps said second cutting edge;

(e) a cutting reel positioned to receive the waxed corrugated cardboard strips, said cutting reel capable of cutting the waxed corrugated cardboard strips into

waxed corrugated cardboard segments;

(f) a conveyor auger housing which includes an inlet end and an outlet end, wherein said outlet end is tapered, said conveyor auger housing is held in a fixed relation to said apparatus housing;

(g) an opening on said conveyor auger housing, wherethrough waxed cardboard segments enter said conveyor auger housing;

(h) a compression conveyor screw rotatably disposed within said conveyor auger housing, said compression conveyor screw including a helical blade extending toward said outlet end of said conveyor auger housing, said helical blade including a plurality of flights;

(i) a log extrusion orifice configured on the terminating end of said outlet end of said conveyor auger housing, wherethrough composite material is extruded, as a result of the rotation of the compression conveyor screw, into a predetermined cross-sectional shape; and

(j) means for segmenting the composite firelog extrusion into individual log sections.

52. An apparatus as recited in claim 51, wherein at least one blade spacer separates and provides spacing between each of said plurality of lower and upper circular blades.

53. An apparatus as recited in claim 52, wherein said blade spacers are configured with recessed centers to minimize the contact with the irregular inner surface of the curricular blades to maintain proper clearances between blades.

54. An apparatus as recited in claim 51, further including a circular blade axial adjustment wherein the axial position of at least one axis of said circular blades can be positioned in relation to the other axis of circular blades to thereby provide control of the juxtaposition forces between upper and lower circular blades.

55. An apparatus as recited in claim 51, wherein said first common axis and said second common axis comprise a first shaft and a second shaft,

respectively, whereupon rotation of said first shaft causes rotation of said lower circular blades and rotation of said second shaft causes rotation of said upper circular blades.

56. An apparatus as recited in claim 55, further comprising means for rotating said first common axis and said second common axis.

57. An apparatus as recited in claim 56, wherein said rotating means comprises a spur gear.

58. An apparatus as recited in claim 51, wherein said cutting blades are configured with teeth which are annularly disposed on the perimeter of said cutting blades, wherein said teeth facilitate the rapid cutting of the waxed corrugated cardboard without slippage.

59. An apparatus as recited in claim 58, wherein said teeth disposed on perimeter of said cutting blades are non-fluted.

60. An apparatus as recited in claim 51, wherein said cutting blades are hollow ground.

61. An apparatus as recited in claim 51, wherein said cutting blades are configured so that interaction between said upper cutting blades and said lower cutting blades proximal the location of cutting edge overlap causes corrugated cardboard being sliceably passed therethrough to exhibit cut edges containing significant fraying.

62. An apparatus as recited in claim 61, wherein said significant fraying is created by the rotating interaction of two hollow ground, non-fluted cutting blades.

63. An apparatus as recited in claim 51, wherein said overlap of first cutting edge and second cutting edge of said teeth provide a metered input feed of waxed

corrugated cardboard as the teeth grip the waxed corrugated cardboard and the movement of the cutting blades pulls the waxed corrugated cardboard therethrough at a predetermined rate proportional to the rotational speed of the cutters.

64. An apparatus as recited in claim 51, wherein at least one guide plate is attached to the housing, wherein said guide plates are configured with slots to allow a generally arcuate portion of said circular blades to pass therethrough, wherein said guide plates direct, or guide, the insertion of waxed corrugated cardboard into the proper feed direction for slicing by the combination of upper and lower circular blades.

65. An apparatus as recited in claim 51, wherein a vertical guide plate is attached to the housing anterior of said circular blades, in relation to the direction of material feed, and wherein a lower portion of said vertical guide is aligned proximal to upper guide plate on a lower end and extends upwardly to a height which provides for separation of waxed corrugated cardboard strips prior to contact with cutting reel and additionally prevents reverse flow of material back into said circular blades.

66. An apparatus as recited in claim 51, wherein said cutting reel is mounted at a fifteen degree angle above the feed path of said waxed corrugated cardboard strips into said cutting reel.

67. An apparatus as recited in claim 51, further comprising a geared drive for rotating said cutting reel.

68. An apparatus as recited in claim 67, wherein said geared drive includes a set of spur gears connected to said cutting reel through which power is applied to rotate said cutting reels.

69. An apparatus as recited in claim 51, wherein said cutting reel comprises: (a) a first and a second end plate;

(b) an axial shaft positioned perpendicularly between said first and said

second end plate; and

(c) a plurality of longitudinal cutting blades disposed around said axial shaft, paddle-wheel style, which are retained generally parallel to said axial shaft and attached to said first and said second end plate.

70. An apparatus as recited in claim 51, wherein said cutting blade of said cutting reel includes a helical twist extending between said first and said second end plate.

71. An apparatus as recited in claim 69, wherein a bed bar knife is attached to said apparatus housing anterior of said circular blades, in relation to the direction of material feed, and said bed bar knife is aligned proximal to lower guide plate positioned such that an edge of said bed bar knife is brought into material shearing proximity with said longitudinal cutting blades of said cutting reel so that the strips of waxed corrugated cardboard material passing rearwardly of said circular cutting blades are placed in shearing contact therebetween bed bar knife and reel for the production of segments thereof.

72. An apparatus as recited in claim 71, wherein a bed plate is configured for retention of said bed bar knife, to allow interchangeable replacement of bed bar knives, wherein said bed plate is attached to said apparatus housing and therein retains said bed bar knife by means of at least one fastener, in a position which provides shearing of the waxed corrugated cardboard strips into waxed corrugated cardboard segments.

73. An apparatus as recited in claim 72, wherein said bed bar knife is retained by said bed plate with non-adjustable fasteners.

74. An apparatus as recited in claim 72, wherein said bed bar knife is retained by at least one fastener which provides longitudinal adjustment of the bed bar knife in relation to the bed plate.

75. An apparatus as recited in claim 74, wherein said fastener is a turnbuckle.

76. An apparatus as recited in claim 51, further including rifling within said conveyor auger housing, wherein said rifling aids the control of radial disposition and interlocking alignment of the waxed cardboard segments as extruded into the artificial firelog.

77. An apparatus as recited in claim 51, wherein the cardboard segments being transported through the conveyor auger housing are compressed to a ratio between approximately 5:1 and approximately 8:1.

78. An apparatus as recited in claim 51, further comprising a means for rotating said compression conveyor screw.

79. An apparatus as recited in claim 78, wherein said conveyor screw rotating means comprises a spur gear.

80. An apparatus as recited in claim 51, wherein said helical blade includes a diameter that decreases towards said outlet end of said conveyor auger housing.

81. An apparatus as recited in claim 51, wherein said flights of said helical blade decrease in length toward said outlet end of said conveyor auger housing.

82. An apparatus as recited in claim 51, wherein the side profile of said helical blade becomes increasingly cupped towards said outlet end of said conveyor auger housing.

83. An apparatus as recited in claim 51, wherein said helical blade is configured with a buildup of weld material of a predetermined shape at the junction of said helical blade and said auger shaft, wherein said buildup of weld material provides a final pushing thrust of said segments through outlet end of said conveyor

auger housing.

84. An apparatus as recited in claim 51, further including a log die attached to said log extrusion orifice, wherein said log die provides for modifying the cross-sectional shape of the extrusion.

85. An apparatus as recited in claim 84, wherein said log die comprises a compression zone proximal to the attachment of said auger.

86. An apparatus as recited in claim 51, wherein said log die includes at least one longitudinal internal surface groove which produces logs with protruding ridges.

87. A compression conveyor auger assembly, for transporting and compressing waxed corrugated cardboard segments, comprising:

(a) a housing, said housing including an inlet end and an outlet end, wherein said outlet end is tapered;

(b) an opening on said housing, said opening disposed adjacent said inlet end of said housing; and

(c) a compression conveyor screw rotatably disposed within said housing, said compression conveyor screw including a helical blade extending between said inlet end and said outlet end of said housing, said helical blade including a plurality of flights.

88. An apparatus as recited in claim 87, wherein the diameter of said helical blade decreases towards said outlet end of said housing, and wherein said flights decrease in length toward said outlet end of said housing.

89. An apparatus as recited in claim 88, further comprising a log die attached to said outlet end of said housing.

90. An apparatus as recited in claim 89, wherein said log die includes at

least one internal longitudinal groove therein.

91. An apparatus as recited in claim 87, wherein said housing includes a circular passageway having rifling.

92. An apparatus as recited in claim 87, wherein the cardboard segments being transported therethrough are compressed to a ratio between approximately 5:1 and approximately 8:1.

93. An apparatus as recited in claim 87, further comprising means for rotating said compression conveyor screw.

94. An apparatus as recited in claim 93, wherein said conveyor screw rotating means comprises a spur gear.

95. An apparatus as recited in claim 87, further including means for segmenting the composite firelog extrusion into individual log sections.

96. An apparatus as recited in claim 87, wherein said helical blade includes a diameter that decreases towards said outlet end of said housing.

97. An apparatus as recited in claim 96, wherein said flights of said helical blade decrease in length toward said outlet end of said housing.

98. A waxed corrugated cardboard cutting assembly, comprising:

(a) a plurality of lower circular blades juxtaposed along a first common axis, said plurality of lower circular blades each including a first cutting edge;

(b) a plurality of upper circular blades juxtaposed along a second common axis, said plurality of upper circular blades each including a second cutting edge;

(c) said plurality of lower and upper circular blades configured to slice the at least one waxed corrugated cardboard sheet placed therebetween into cardboard strips, whereby said first common axis is generally parallel to said second common

axis, and said first cutting edge overlaps said second cutting edge; and

(d) a cutting reel positioned to receive the waxed corrugated cardboard strips, said cutting reel capable of cutting the waxed corrugated cardboard strips into waxed corrugated cardboard segments;

99. An apparatus as recited in claim 98, wherein said common axis of said circular blades is axially adjustable to provide control of the interface force between upper and lower circular blades.

100. An apparatus as recited in claim 98, wherein each of said cutting edges of said lower circular blades and said upper circular blades comprise a plurality of non-fluted teeth.

101. An apparatus as recited in claim 98, wherein said first common axis and said second common axis comprise a first shaft and a second shaft, respectively, whereupon rotation of said first shaft causes rotation of said lower circular blades and rotation of said second shaft causes rotation of said upper circular blades.

102. An apparatus as recited in claim 101, further comprising means for rotating said first and said second shafts.

103. An apparatus as recited in claim 102, wherein said first and said second shaft rotating means comprises spur gears.

104. An apparatus as recited in claim 98, further comprising means for rotating said cutting reel.

105. An apparatus as recited in claim 104, wherein said cutting reel rotating means comprises a spur gear.

106. An apparatus as recited in claim 98, further comprising:

(a) a lower guide plate which includes a plurality of slots through which said first cutting edges of said lower circular blades extend therethrough; and

(b) an upper guide plate which includes a plurality of slots through which said second cutting edges of said upper circular blades extend therethrough, wherein said lower guide plate and said upper guide plate form a channel therebetween for receiving and aligning waxed corrugated cardboard sheets for cutting by the circular blades.

107. An apparatus as recited in claim 98, wherein a vertical guide plate is positioned anterior of said upper circular blades with a lower end aligned proximal to the upper guide plate with an upper end extending upwardly to a height which provides for separation of waxed corrugated cardboard strips prior to contact with cutting reel and prevents reverse flow of material back into said circular blades.

108. An apparatus as recited in claim 98, wherein a bed bar knife is positioned anterior of said lower circular blades with a top portion aligned proximal to lower guide plate wheresopositioned at least one edge of said bed bar knife is in material shearing proximity with moveable portions of said reel such that interposing waxed corrugated cardboard material being fed into the apparatus is placed in shearing contact therebetween bed bar knife and reel and sheared into waxed corrugated cardboard segments.

109. An apparatus as recited in claim 98, wherein a bed plate is configured for attachment of said bed bar knife, and wherein said bed plate retains said bed bar knife in a position for material shearing therebetween said cutting reel.

110. An apparatus as recited in claim 109, wherein said bed bar knife is retained by said bed plate with non-adjustable fasteners.

111. An apparatus as recited in claim 109, wherein said bed bar knife is retained by at least one fastener which provides longitudinal adjustment of the bed bar knife in relation to the bed plate.

112. An apparatus as recited in claim 111, wherein said fastener comprises a bolt with nut which flexibly retains bed bar knife to bed plate and a turnbuckle configured to provide an adjusting force wherein the bed bar knife may be adjustably retained in the correct shearing position in relation to the cutting reel.

113. An apparatus as recited in claim 98, wherein said cutting reel is mounted at an approximate fifteen degree angle above the direction in which the waxed corrugated cardboard slices travel upon exiting anterior of said upper and lower cutting blades after being sliced.

114. An apparatus as recited in claim 98, wherein said cutting reel comprises:

(a) a first and a second end plate;

(b) an axial shaft positioned perpendicularly between said first and said second end plate; and

(c) a plurality of cutting blades disposed around said axial shaft, said cutting blades spaced equally apart and generally parallel to said axial shaft; said cutting blades attached to said first and said second end plate;

wherein each said cutting blade includes a helical twist extending between said first and said second end plate.

115. An apparatus as recited in claim 114, wherein said helical twist of each said cutting blade does not exceed an angle generally over 13 degrees between said first and second end plates.

116. An artificial firelog comprising a plurality of compressed segments of waxed corrugated cardboard which are radially disposed within said firelog.

117. An artificial firelog as recited in claim 116, wherein said compressed segments have been compressed to a thickness between approximately 1/8th and approximately 1/5th of their original thickness without generally having their corrugated structure destroyed or glued together.

118. An artificial firelog as recited in claim 116, wherein said compressed segments of waxed compressed corrugated cardboard have opposing frayed edges.

119. An artificial firelog as recited in claim 116, wherein during the burning of said firelog the heated waxed segments expand by memory to provide an artificial log which burns efficiently in a manner resembling continuous bark burning of a natural firelog as each segment is consumed and the next segments starts burning.

120. A firestarter chip manufactured using a cutting assembly as recited in claim 98, comprising:

(a) a first substantially planar member;

(b) a second substantially planar member;

(c) a corrugated section disposed between said first substantially planar member and said second substantially planar member; and

(d) means for adhering said corrugated section to said first substantially planar member and said second substantially planar member.

121. An artificial firelog manufactured by an apparatus as recited in claim 1, comprising a plurality of compressed segments of waxed corrugated cardboard which are radially disposed within said firelog.

122. An artificial firelog as recited in claim 121, wherein said compressed segments have been compressed to a thickness between approximately 1/8th and approximately 1/5th of their original thickness without generally having their corrugated structure destroyed or glued together.

123. An artificial firelog as recited in claim 121, wherein said compressed segments of waxed compressed corrugated cardboard include opposing frayed edges.

124. A firelog as recited in claim 121, wherein said firelog includes at least one longitudinally-disposed rail thereon.

125. A method for manufacturing firestarter chips using the cutting assembly recited in claim 98, comprising the steps of:

(a) slicing a waxed corrugated cardboard sheet into cardboard strips;

(b) slicing at least one sheet of paper into paper strips simultaneous to said slicing said waxed corrugated cardboard sheet strips; and

(c) chopping said cardboard strips and said paper strips into waxed corrugated cardboard segments and paper segments, respectively.

126. A method for manufacturing firestarter chips as recited in claim 125, further comprising the steps of:

(a) gathering said waxed corrugated cardboard segments and said paper segments; and

(b) packaging said waxed corrugated cardboard segments and said paper segments.

127. A method for manufacturing an artificial firelog using an apparatus recited in claim 37, comprising the steps of:

(a) converting waxed corrugated cardboard sheets into segments;

(b) compressing said waxed corrugated cardboard segments to a ratio approximately between 5:1 and 8:1;

(c) extruding said compressed waxed corrugated cardboard segments into a continuous log structure; and

(d) cutting said continuous log structure into individual firelogs.

128. A method for manufacturing an artificial firelog as recited in claim 127, further comprising the step of arranging waxed corrugated cardboard segments flat horizontally disposed between the rifling in the housing and helical blade of the conveyor screw wherein so aligned said corrugated cardboard segments become radially disposed interlocking segments within the artificial firelog extrusion.

129. A method for manufacturing segments of waxed corrugated cardboard from waxed corrugated cardboard sheets in accordance with the apparatus of claim

98, comprising the steps of:

(a) slicing said waxed corrugated cardboard sheets into waxed corrugated cardboard strips; and

(b) chopping said waxed corrugated cardboard strips into waxed corrugated cardboard segments.

130. A method as recited in claim 129, wherein said step of slicing said waxed corrugated cardboard sheets is performed so that opposing frayed edges are created on said waxed corrugated cardboard strips.